

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-2. (canceled)

3. (amended) The fuel vapor recovery system of claim ~~241~~ wherein an outer surface of said carbon canister has enhanced thermal transfer surface area to increase contact area between said carbon canister and said fuel.

4. (amended) The fuel vapor recovery system of claim ~~241~~ wherein an outer surface of said carbon canister has fins.

5. (represented) A fuel vapor recovery system for an internal combustion engine disposed in a vehicle, the vehicle having a fuel tank coupled to a fuel filler tube, the fuel vapor recovery system comprising: a carbon canister disposed in the fuel filler tube ~~The fuel vapor recovery system of claim 1~~ wherein said carbon canister is further comprised of a housing, activated charcoal within said housing, and conductive strips attached to an interior surface of said housing, said conductive strips being in contact with said activated charcoal.

6. (amended) The fuel vapor recovery system of claim ~~51~~ wherein said carbon canister is further comprised of a housing comprising a material having a thermal conductivity greater than 0.15 W/cm-K and activated charcoal disposed inside said housing.

7. (amended) The fuel vapor recovery system of claim ~~51~~ wherein a cross-sectional area ratio between an outer surface of said carbon canister and an inner surface of the fuel filler tube is greater than a predetermined ~~arearatio~~.

8. (canceled)

9. (amended) The fuel vapor recovery system of claim ~~241~~ wherein said carbon canister has at least one perforation for allowing fuel vapors to pass through an external surface of said carbon canister.

10. (canceled)

11. (amended) A fuel system for an internal combustion engine disposed in a vehicle, comprising:

a fuel tank disposed in the vehicle;
a fuel filler tube coupled to said fuel tank;
a fuel cap coupled to an opening of said fuel filler tube; and
a carbon canister disposed in said fuel filler tube, said carbon canister having at least one perforation for allowing fuel vapors to pass through an external surface of said carbon canister.

12. (canceled)

13. (original) The fuel system of claim 11, further comprising:

an inlet duct coupled to said carbon canister for conducting ambient air to said carbon canister;
a valve in said air inlet duct; and
an outlet duct coupled to said carbon canister for conducting ambient air and fuel vapors to the engine.

14. (original) The fuel system of claim 11, further comprising: an electronic control unit coupled to the engine and said valve, said electronic control unit determining that said carbon canister should be purged and opening said valve to initiate purging of said carbon canister.

15. (amended) The fuel system of claim 11 wherein said carbon canister ~~is~~ forms a collar around the fuel filler tube and said fuel filler tube has at least one passage through the carbon canister for conducting fuel to said fuel tank.

16-17. (canceled)

18. (amended) The method of claim ~~2416~~ wherein the carbon canister absorbs fuel vapors from said vehicle fuel tank.

19. (represented) A method for assembling a fuel vapor recovery system of an automotive vehicle, the fuel vapor recovery system having a carbon canister for absorbing fuel vapors, comprising:

installing the carbon canister within a fuel filler tube wherein said fuel filler tube is coupled to a vehicle fuel tank ~~The method of claim 16, further comprising: coupling an air inlet duct and an outlet duct to the carbon canister wherein said ducts pass through said fuel filler tube.~~

20. (original) The method of claim 19 wherein said air inlet duct transports fresh air to the carbon canister and said outlet duct transports said fresh air mixed with desorbed fuel vapors from the carbon canister to an engine intake, said engine being disposed in the vehicle.

21. (canceled)

22. (represented) ~~The fuel vapor recovery system of claim 21~~ A fuel vapor recovery system for an internal combustion engine disposed in a vehicle, the vehicle having a fuel tank coupled to a fuel filler tube, comprising:

a carbon canister having a housing and activated charcoal within said housing, said carbon canister being in communication with the fuel tank such that fuel vapors in the fuel tank have access to said activated charcoal wherein said carbon canister is mounted in the fuel filler tube; and
at least one conductive plate connected to an inside surface of said housing, said conductive plate being in contact with said activated charcoal.

23. (amended) The fuel vapor recovery system of claim 22, further comprising:

an inlet duct coupled to said carbon canister for conducting ambient air to said carbon canister;

a valve in said air inlet duct; and

an outlet duct coupled to said carbon canister for conducting ambient air and fuel vapors to the engine.

24. (new) A fuel system for an internal combustion engine disposed in a vehicle, comprising:

a fuel filler tube;

a fuel tank coupled to an exit of said fuel filler tube;

a fuel cap coupled to an opening of said fuel filler tube; and

a carbon canister disposed within said fuel filler tube wherein said carbon canister is in communication with said fuel filler tube.

25. (new) The fuel system of claim 24 wherein said carbon canister is further comprised of a housing, activated charcoal within said housing, and conductive strips attached to an interior surface of said housing, said conductive strips being in contact with said activated charcoal.

26. (new) The fuel system of claim 24 wherein said fuel cap is decoupled from said opening of said fuel filler tube during fuel delivery.

27. (new) The fuel vapor recovery system of claim 24 wherein said carbon canister is further comprised of a housing comprising a material having a thermal conductivity greater than 0.15 W/cm-K and activated charcoal disposed inside said housing.

21

28. (new) The fuel vapor recovery system of claim 24 wherein a cross-sectional area ratio between an outer surface of said carbon canister and an inner surface of the fuel filler tube is greater than a predetermined ratio.
